Application No.: 08/957,833

Filed: October 27, 1997 Group Art Unit: 2772

In the Claims:

Kindly add new claims 31-53 as follows:

An article comprising a substrate having a mosaic thereupon, said mosaic image having an appearance that approximates 3 a target image through use of a plurality of source images, and which mosaic image is generated by a process executed with a 4 computer comprising the steps of: 5 loading the target image into the computer; 6 dividing the target image into a plurality of tile regions, each tile region representing a distinct locus of the target image, 8 9 and for each tile region: 10 comparing source images to the tile region to produce a 11 measurement of visual similarity, said comparing step including 12

comparing source images to the tile region to produce a measurement of visual similarity, said comparing step including analyzing a plurality of individual portions of each source image; selecting the source image with the highest measurement of visual similarity to represent the tile region; and positioning the selected source image in the mosaic image

at a locus corresponding to the locus of the tile region.

- 2 -

13

14

15

16

17

Application No.: 08/957,833 Filed: October 27, 1997 Group Art Unit: 2772

- 1 32. The article of claim 31 wherein the process includes the
- 2 further step of dividing the tile region into distinct sub-regions,
- 3 each sub-region corresponding to a specific portion of the source
- 4 image, and comparing each respective sub-region with each
- 5 respective source image portion to produce the measurement of
- 6 Lvisual similarity.
- 33. The article of claim 32 wherein the process includes the further step of employing source images having one pixel per
 - 3 / \ \ \ \ \ \ \ \ \ \ \ respective sub region.
 - 1 3 34. The article of claim 31 wherein the process includes the
 - 2 further step of computing the average Root-Mean Square error of
 - 3 Red, Green and Blue channels.
 - 1 32.35. The article of claim 31 wherein the process includes the
 - 2 further step of removing source images selected in said selecting
 - 3 step from consideration such that no one source image appears more
 - 4 than once in the mosaic image.
 - 1 33.36. The article of claim 21 wherein the process includes the
 - 2 further step of capturing source images, and storing the captured
 - 3 source images in a database.

Application No.: 08/957,833 Filed: October 27, 1997 Group Art Unit: 2772

33

1 3/37. The article of claim 26 wherein the process includes the

- 2 further step of generating modified source images by cropping the
- 3 source images captured in said capturing step to square.

34

- 1 35 36. The article of claim 27 wherein the process includes the
- 2 further step of, in the case of a captured source image in
- 3 landscape format, cropping the captured image from center.

35

1 34. The article of claim 36 wherein the process includes the further step of, in the case of a captured source image in portrait format, cropping the captured image from above center.

34

- 1 3/40. The article of claim 37 wherein the process includes the
- 2 further step of categorizing the captured source images within the
- 3 database.

34

- 1 % 41. The article of claim 31 wherein the process includes the
- 2 further step of storing the captured source images at different
- 3 levels of resolution.

29

- 1 3/42. The article of claim 3/1 wherein the process includes the
- 2 further step of deselecting the source image with the highest
- 3 measurement of visual similarity if it is determined that the

Application No.: 08/957,833 Filed: October 27, 1997

Group Art Unit:

4 source image has a higher measurement of visual similarity to

- another tile region. 5
- 40 A3. The article of claim 31 wherein the process includes the 1
- further step of specifying at least one source image for assured 2
- 3 inclusion in the mosaic image, the assured source image being
- 4 positioned in the mosaic image at a locus corresponding to the
- 5 locus of the tile region having the highest measure of visual
- similarity therewith.
 - 41
- The article of claim 31 wherein the process includes the 44.
- 2 further step of specifying a sub-category of source images for
- exclusive matching with a predetermined portion of the target 3
- 4 image.
 - 42
- 45. 1 The article of claim 34 wherein said article includes a
- 2 printout from a digital printer.
 - 43
- 29 1 £6. The article of claim 31 wherein said article includes a
- 2 photograph.
 - 44 29
- 1 47. The article of claim 34 wherein said article includes
- 2 photographic paper.

Application No.: 08/957,833 Filed: October 27, 1997 Group Art Unit: 2772

45

6

7

8

9

11

12

13

14

15

16

17

29

1 48. The article of claim 21 wherein said article includes

photographic film.

17 49. A storage medium for use with a computer comprising a substrate for storing at least one mosaic image having an appearance that approximates a target image through use of a plurality of source images, and which mosaic image is generated by a process comprising the steps of:

loading the target image into the computer;

dividing the target image into a plurality of tile regions, each tile region representing a distinct locus of the target image, and

10 for each tile region:

comparing source images to the tile region to produce a measurement of visual similarity, said comparing step including analyzing a plurality of individual portions of each source image; selecting the source image with the highest measurement of visual similarity to represent the tile region; and

positioning the selected source image in the mosaic image at a locus corresponding to the locus of the tile region.

41. 46

1 50. The storage medium of claim 49 wherein said substrate includes

2 a floppy disk.

Application No.: 08/957,833 Filed: October 27, 1997

Group Art Unit: 2772

1 51. The storage medium of claim 49 wherein said substrate includes

2 a compact disc.

1 52. The storage medium of claim 49 wherein said substrate includes an optical disk.

50 μω 1 53. The storage medium of claim 49 wherein said substrate includes

2 a removable hard disk.